

**REMARKS**

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

**Disposition of the Claims**

Claims 1-12 are pending in this application. New claim 13 has been added by way of this reply. Claims 1, 10, and 13 are independent. The remaining claims depend, directly or indirectly, from claims 1 and 10.

**Amendments to the Claims**

Claims 1, 3, 4, 8, and 10 have been amended in this reply to clarify the present invention. In particular, claims 1 and 10 have been amended to clarify that the cylindrical body attachable in a work string has an internal throughbore and an external sleeve located around the body defining a trap for junk. Claims 2, 4, and 8 have been amended in view of the amendments to claim 1. No new matter has been added by way of these amendments as support may be found on page 7, lines 14-24, of the originally filed specification.

**Rejections under 35 U.S.C. § 102**

Claims 1, 3, 4, 5, and 7-11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,276,452 ("Davis"). Claims 1, 3, 4, 8, and 10 have been amended in this reply to clarify the present invention. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

Claim 1, as amended, recites a downhole tool for collecting and retrieving junk from a well bore, the tool including a cylindrical body attachable in a work string, the body

having an internal throughbore and an external sleeve located around the body defining a trap for junk, a multi-faceted surface comprising a plurality of projections arranged at an end of the body for contacting with and breaking up junk, and a plurality of inlet ports through which the broken up junk passes into a trap for collection, wherein each projection is located between adjacent inlet ports and wherein adjacent projections define channels therebetween which are shaped to direct the junk into the respective inlet ports.

Claim 10, as amended, recites a method of collecting and retrieving junk within a well bore, by means of circulating fluid through a workstring comprising a cylindrical body, said body having an internal throughbore, and an external sleeve located around the body defining a trap for junk, the method further including the steps of (a) providing a multi-faceted contact surface on a work string, the surface including a plurality of projections and a plurality of inlet ports providing access to the trap, each projection being located between adjacent inlet ports, (b) breaking up large pieces of junk by contact with the surface, (c) directing the broken-up junk towards the inlet ports along channels defined between adjacent projections and collecting the broken-up junk through the inlet ports, and (d) storing the broken-up junk in said trap.

Davis discloses an apparatus for drawing small milling debris into a combination milling and debris removal tool and subsequently into a separator section. The Davis tool is configured to separate small cutting debris from fluid flow at the bottom hole assembly (BHA). Davis' tool includes fluid eductor nozzles that generate reverse circulation of a fluid through the tool. Specifically, Davis teaches a tool with a plurality of fluid eductor nozzles (34) that during operation create a vacuum in the ejection port section (12). The vacuum draws fluids up through the intake ports (26) of the tool. (See Davis, col. 5, lines 20-57). Such reverse circulation is

insufficient to separate junk, as junk would settle in the BHA in a typical operation or become balled-up in the region of the mill blade parts in a lateral borehole.

In contrast, the present invention provides a tool that can be inserted within a work string. The tool includes a body (12) having an axial bore (22) therethrough providing an access for fluid from the upper end to the lower end of the tool. A sleeve (24) is located around the body defining a trap for junk. When the tool is run into a wellbore or when fluid is circulated towards the tool through the axial bore (22) (forward circulation), fluid is forced up the exterior of the tool, past the narrow throat section (52) and into the large inlet ports (40). In the Advisory Action dated February 11, 2008, the Examiner asserts that the structure and method of the present application, as recited in claims 1 and 10, do not exclude the reverse circulation of Davis. Claims 1 and 10 have been amended in this reply to clarify that the apparatus and method of the present invention require forward circulation, as describe in the specification of the present application.

Specifically, claim 1 has been amended to recite a cylindrical body attachable in a work string, the body having an internal throughbore and an external sleeve located around the body defining a trap for junk. Such a configuration of the downhole tool provides forward circulation of fluid. As described above, the fluid is circulated down through the axial bore of the tool and debris-laden fluid is then forced up the exterior of the tool and into the inlet ports of the sleeve configured to trap junk. Davis teaches a device that generates reverse circulation. Davis fails to teach or disclose a downhole tool that includes a body having an internal throughbore and an external sleeve located around the body, thereby defining a trap for junk, as required by amended independent claims 1 and 10. Accordingly, Davis fails to teach or disclose a downhole tool that provides or could provide forward circulation of a fluid.

Applicant respectfully notes that in order for a claim to be anticipated, “every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim.” *Brown v. 3M*, 265 F.3d 1349, 1351 (Fed. Cir. 2001). In view of the above, Davis fails to teach or suggest all the limitations recited in amended claims 1 and 10, as required to support a rejection under §102. Thus, claims 1 and 10 are patentable over Davis. Dependent claims are allowable for at least the same reasons. Accordingly, withdrawal of the rejection is respectfully requested.

### **Rejections under 35 U.S.C. § 103**

Claims 2, 6, and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of U.S. Patent No. 5,682,950 (“Bjornstad”). Claims 2 and 6 depend from independent claim 1. Claim 12 depends from independent claim 10. Claims 1 and 10 have been amended in this reply to clarify the present invention recited. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

Bjornstad discloses a tool specifically suited for deviation wells, *e.g.*, non-vertical wells, wherein the junk collector is disposed proximate a mill. As the mill (5) moves through the wellbore, drilling fluid and milled material is pressed through a channel (4) in the mill. Thus, the fluid and milled material are pressed into the junk chamber as a result of the tool and drilling pipe being pulled into the well. As the drilling pipe, and therefore junk collector, is rotated, the junk in the junk collector is forced further into the junk chamber.

The Examiner cites Bjornstad as support for covering an outer surface of the mill with tungsten carbide and for use of a valve in order to close the chamber, as required by dependent claims 2, 6, and 12. Applicants respectfully submit that amended claims 1 and 10 are

patentable over Davis and Bjornstad, whether considered separately or in combination. In particular, amended claims 1 and 10 provide a downhole tool and method for retrieving junk from a wellbore, wherein the tool includes a body having an internal throughbore and an external sleeve located around the body defining a trap for junk. As such, the tool of the present invention is configured to provide forward circulation tool.

As discussed above, Davis discloses a reverse circulation apparatus. Further, Davis discusses the advantages of using a reverse circulation over a forward circulation apparatus, citing lower fluid flow rates required to move cuttings, and the use of smaller pumps and motors at the well site for the reverse circulation apparatus. (See Davis, col. 5, lines 1-19).

Davis cannot be modified to teach or suggest a junk retrieval tool that uses forward circulation. As such, Davis cannot be modified to include a body having an internal throughbore and an external sleeve located around the body defining a trap for junk, as required by amended claims 1 and 10. Applicants respectfully note that a proposed modification or combination of prior art references cannot change the basic principle under which the primary reference was designed to operate.

If a "proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious [under 35 U.S.C. § 103]". See MPEP § 2143.01. See also, *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Furthermore, a suggested combination of references cannot change "the basic principle under which the [primary reference] construction was designed to operate." See *id* (citing *In Re Ratti* at 813).

As discussed above, a proposed modification which changes the principle of operation of the primary reference is improper. *See* MPEP 2143.01. Modifying Davis to describe the claimed invention, requires changing the principle of operation of Davis. Therefore, Davis cannot be modified to teach the claim invention. Accordingly, the teachings of the references, Davis and Bjornstad, are not sufficient to render independent claims 1 and 10 *prima facie* obvious under 35 U.S.C. § 103.

In view of the above, amended independent claims 1 and 10 are patentable over Davis and Bjornstad, whether considered separately or in combination. Dependent claims 2, 6, and 12 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

#### **New Claim**

New claim 13 has been added in this reply. Claim 13 recites a downhole tool for collecting and retrieving junk from a well bore, the tool including a cylindrical body attachable in a work string, said body having an internal throughbore, and an external sleeve located around the body defining a trap for junk, and a multi-faceted surface comprising a plurality of projections arranged at an end of the body for contacting with and breaking up junk, and a plurality of inlet ports through which the broken up junk passes into the trap for collection wherein each projection is located between adjacent inlet ports. No new matter has been added by way of this amendment, as support may be found in, for example, originally filed claim 1 and page 7, lines 14-24, of the originally filed specification.

As discussed with reference to amended independent claims 1 and 10, the downhole tool of claim 13 provides a tool for retrieving junk from a wellbore using forward


circulation, as the tool include similarly includes a cylindrical body attachable in a work string, the body having an internal throughbore and an external sleeve located around the body defining a trap for junk. As discussed above, Davis fails to teach or suggest a forward circulation tool. Any modification of Davis to provide forward circulation would change the principle of operation of Davis, and therefore is insufficient to render the claimed invention *prima facie* obvious. Thus, Applicant believes new claim 13 is similarly patentable.

### Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 17172/022001).

Dated: March 27, 2008

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